than usual at this time of the year. The general prospects appear to be somewhat less encouraging in other watersheds, though the fact is noted that the snow is in slightly better condition for keeping in the Sevier Lake and the Green and Colorado Rivers watersheds.

REPORT OF SNOW MEASUREMENTS IN MAPLE CREEK WATERSHED, UTAH COUNTY, UTAH, MARCH 4 TO MARCH 14, 1912.

By A. H. THIESSEN, Section Director.

With the hope of supplying exact information to users of water, be they irrigators or water-power engineers, the local office of the United States Weather Bureau at Salt Lake City, Utah, conducted snow surveys in Maple Creek watershed in the springs of 1911 and the present year.

Rather than depend upon the measured snowfalls at a few isolated stations, the most of which can not, on account of the physical difficulties, be located anywhere except on the foothills, and not where the snow is stored for spring and summer use, and therefore as one must rely on estimates of the actual amount of snow and ice in the canyons of the higher mountains, a minute snow survey was made of the snow fields in Maple Creek watershed.

This snow survey was not made alone for the purpose of furnishing data to the users of Maple Creek water, but for the wider intention of developing a plan which can be applied to the measuring of the water equivalent in all mountains.

The scheme, in short, is to find in the early spring of the year by actual measurement the extent, depth, character, and water content of every snow field in a particular watershed together with data regarding the condition of the ground, and indeed all other points which in any way would tend to augment our knowledge regarding the future water supply are noted.

A general summary of the snow survey of Maple Creek Canyon made March 4–14, 1912, follows. It should be noted that there is about the same amount of snow, or more exactly the same water content, as there was last year; but the character of the snow varies a great deal from that of last year. This year the density is much less and therefore not in a condition for late keeping. We therefore expect the early run-off to be heavy and that there will be a lack of water this coming summer.

Further, it is believed that the conclusions drawn from the snow conditions in this watershed may be applied to all watersheds in Utah, because the weather conditions have been much the same, and the precautions which are urged upon the users of Maple Creek water should be heeded by all users of water in Utah.

GENERAL SUMMARY.

The snow in Maple Creek watershed this spring is unusually light and loose in character, a condition unfavorable for preservation very late in summer, and it is reasonable to expect that much of the present supply will be carried away in the spring freshets. For this reason attention to the storage reservoirs and to main ditches, where necessary, would doubtless be profitable, so that as little loss as possible from the run-off may be had.

The general prospect for irrigation water based on this spring's snow survey is poorer than that of last year, and the consensus of opinion is that the supply of last year was below normal. However, it is reassuring to note that in all the explorations of the snow layer the soil underneath was found to be unfrozen and thoroughly soaked, being a very satisfactory condition for minimizing the loss of water in the surface run-off and for lengthening the period of stream flow from seepage water.

As a general rule the few east-and-west hollows carried more moisture this year than they did last year, while the north-and-south tributaries have considerably less water in them in the form of snow than was carried last year. In 1911 the average depth of snow over the watershed, comprising about 4,000 acres of snow, was 36 inches, with a water equivalent of 11.5 inches, or 32 per cent water; this year the average depth of about 4,500 acres of snow is 42.5 inches, but the water in it, as shown by the density weighing scales from 297 tests in representative places, is only 10.1 inches, the snow being only 24 per cent water. From these figures it is found that this year's water supply in the Maple Creek watershed is only 88 per cent of the supply last year.